



SOLAR POWER
A U S T R A L I A

Unit 3, 301 Hillsborough Rd, Warners Bay NSW 2282

02 4954 3310

**POWER
THAT SHINES**

Mine Site Support Services

If you **operate a remote facility** off the grid, or require an **uninterrupted power supply** for utility connected equipment, then a **reliable autonomous power system and expert technical support is a necessity.**

Solar Power Australia offers integrated solutions and products for a wide range of industrial and commercial applications, from large independent power plants to small telecommunication repeater stations. Typical applications include:

- ▶ Telemetry and SCADA at mining sites
- ▶ Construction site and surveillance lighting
- ▶ Telecommunications applications
- ▶ Traffic signals and lighting for roads and carparks
- ▶ Instrumentation and obstruction lighting
- ▶ Water pumping, level monitoring and pump control
- ▶ Remote research facility operations
- ▶ Power for cathodic protection systems



CONTACT US OR VISIT OUR WEBSITE for more information and products.

REMOTE POWER - OFF-GRID SYSTEMS

Solar Power Australia has provided custom-engineered remote power solutions to many industrial and commercial customers. Our close relationships with manufacturers coupled with our large stockholdings allow us to choose high quality products at lower costs with rapid system turn around. Here are some projects that we have developed to meet a variety of situations.



BGP GAS PIPELINE

INVENSYS & NT GAS

Five dual redundancy solar power systems operate the communications, control and safety equipment along the 200km+ Bonaparte Gas Pipeline in the Northern Territory, which is responsible for supplying a large portion of Darwin and Northern NT's electricity.



COMMS TRAILERS

Modular Mining Systems (MMSI)

Supply and construction of 150 remote transportable power systems for radio & GPS navigation communication networks for mining sites. These systems were fitted to custom built trailers to allow appropriate positioning for optimum communication paths.



ARTC TRACK UPGRADE

ARTC & Ansaldo

Pole mounted solar panels and vandal proof IP rated battery enclosures were installed at 53 interstate railway signal sites throughout NSW and Qld to provide power to important operational equipment where mains power was inaccessible.

Contact us on **02 4954 3310** or email info@solarpoweraustralia.com.au to discuss your requirements.

WHY SOLAR POWER?

- ▶ Solar Power is reliable and cost effective
- ▶ Solar vs Cable - Cost benefit of a remote solar system vs running cables
- ▶ Safety: underground / overhead cables
- ▶ Solar vs Diesel - Solar more reliable and virtually maintenance free. Solar eliminates the need for re-fuelling and start up
- ▶ Environmental risk - Emissions and remote diesel containment

MINING APPLICATIONS

Solar Power can be used for, but is not limited to, the following applications:

- ▶ Power supply for remote communications equipment
- ▶ Street and area lighting (timer activated)
- ▶ Water pumping
- ▶ Lunch rooms/amenities
- ▶ Security cameras
- ▶ Gate operations
- ▶ Noise, blast and dust monitoring stations
- ▶ Mobile weather stations
- ▶ Flow Meters



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OUR SERVICES

Our services include professional engineering, custom system design, customised documentation such as installation and maintenance manuals, and system performance projections.

Each system design is verified against performance criteria, reliability and function and comply with rigid industry standards. All system assemblies are tested and carefully packed prior to shipment.

WHAT WE OFFER

We offer an extensive line of pre-engineered systems to suit specific application requirements and ensure fast turnaround of systems to meet demanding schedules.

Whether this is solar and wind contributions for hybrid systems, equipment integration or specific component selections to suit particular applications or environments; Solar Power Australia can provide customised solutions for your business.

OUR APPROACH

Our approach to ensuring that we provide the best designed system involves a complete assessment of load requirements including duty cycle and characterisation of any voltage variation, as well as the site environmental conditions and access to renewable energy resources.

We will support the installation of your renewable energy system to a level that suits your needs and budget.

Portable Solar Power Systems



Applications & Benefits

Solar Power Australia have been designing and manufacturing custom made portable solar power systems since 2000. With expertise in producing reliable solar power systems for over 11 years you can be sure that the system will suffer no downtime even through bad weather. Our standard systems include up to 7 days backup power and have options for remote monitoring via 3G. Only high quality components are used to ensure longevity and reliability of your system. Trailers can be designed to be fully compliant with AS3000, AS4509, AS4242, AS4871 and MDG15.

APPLICATIONS

- ▶ Power supply for remote communications equipment
- ▶ Mobile weather stations
- ▶ Street and area lighting (timer activated)
- ▶ Security cameras
- ▶ Gate operations



BENEFITS

- ▶ Portable systems are suitable for temporary deployment where Communications, Light or Security is needed.
- ▶ Programmable and customisable to any power needs.
- ▶ High Quality Construction and Components.
- ▶ Eliminates costly cable runs.





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Solar Lighting Systems

Solar lighting is a clean and effective solution for sites where the cost or complication of mains cable installation is prohibitive.

Solar Power Australia design, manufacture and install solar lighting for the illumination of streets, parks, walkways, jetties and a variety of other public spaces.



BENEFITS

- Provision of light in any location no matter how remote.
- Fully automated operation and programmable working times
- Eliminates expensive mains cable installation costs
- High quality construction and components
- Engineer certified to withstand all Australian wind conditions
- Eliminates electricity bills
- Environmentally friendly – No emissions or greenhouse generation

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STANDARD SOLAR STREETLIGHT SPECIFICATIONS – ALL NIGHT OPERATION

	30W LED	50W LED
LIGHT OUTPUT	2400 lumen	4000 lumen
INSTALLED SOLAR CAPACITY	185W	370W
BATTERY BANK RESERVE <i>(no solar input)</i>	4 day	5 day
STANDARD LUMINAIRE HEIGHT	6m	6m

The batteries, solar regulator and control equipment are typically mounted in a steel enclosure located at the base of the pole. Tamper resistant lockable handles can also be incorporated.



SYSTEM OPERATION

The light automatically activates at the onset of dusk and is powered through the night by long-life deep cycle batteries stored at the base of the pole. At sunrise, or after an adjustable number of hours, the light turns off and the solar panels will recharge the batteries until full again.

A robust maximum power point tracking (MPPT) solar regulator extracts the best performance possible from the solar panels and ensures that the batteries are charged in a fully optimised manner, promoting long battery life. The regulator controls the activation of the light and can be setup with a variety of light interval regimes to suit the application.

POWER SYSTEM

Our light systems are designed to run reliably throughout winter and stretches of poor weather and deliver continuing performance year after year. The solar modules carry a full 25 year warranty and only high quality, American made, maintenance free gel batteries are used to ensure long service life and maximum performance.

LUMINAIRES

The 30W and 50W LED lamps supply a broad spreading light suitable for illuminating parks, walkways, carparks, loading areas, advertising displays and endless other applications. The 100W LED luminaire offers an intense light output that can run for up to 7 hours every night, 13 hours every second night, or for 3 nights in a row with a 3 day recharge. Fluorescent T5, HID spotlight and other light types may also be incorporated for specialised applications.

POLE STRUCTURE

Light poles can be supplied as either hot dip galvanised or with a powdercoat paint finish in a variety of colours. Outreach arms and solar panel mounting brackets can be rotated throughout 360° to suit the specific requirements of the site.

SPA solar light components can often be retrofitted to existing lights and light poles, and we welcome all enquiries regarding custom designs and needs.

Please contact us to discuss design, pricing or supply in more detail.

Light...
where you need it,
when you need it.



SOLAR LIGHTING SKID FOR THE MINING INDUSTRY

Fully automated, transportable, self contained package with easy setup.

Offers 13hrs lighting per night and weatherproof enclosures.

Can be programmed to turn on and off dependent on light conditions.

Robust, stable structure - engineered to withstand high winds.

Flexible design - easily adjust solar panel and lighting positions.

NO greenhouse gas emissions. **NO** running costs. **NO** maintenance.



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LVD Induction Lamps

LVD luminaires offer many features that make it an attractive new technology in lighting. With a rated life of up to 100,000 hours, the luminaires need to be replaced less often than traditional alternatives. Particularly useful in applications where lamp replacement is cumbersome and expensive. Examples include hard-to-reach areas such as tunnels, airports & warehouses.

LVD lights are resistant to line voltage fluctuations and light output will remain constant over a wide range of input voltages. The induction lamp is ideal for indoor and outdoor applications where durability and long life is of high priority.

The induction lighting system provides a longer-lifelamp, superior lumen maintenance and the crisp white light currently available from similar wattage metal halide lighting systems. These product advantages translate into major dollarsavings when considering maintenance, labor and replacement lamp costs of existing metal halide lighting fixtures.

LUMINAIRE COMPARISON

	LVD	METAL HALIDE & HIGH PRESSURE SODIUM
Warranty	10 yrs	None
Life Hours	100,000	6,000 to 20,000
Energy Efficiency	Excellent	Low
Lumen Depreciation	5% @ 2,000 Hrs	30 to 40% @ 2,000 Hrs
Lamp Operating Temperature	Low, < 27°C - Reduces A/C Cost	High, > 150°C - Increased A/C Cost
CRI	> 80 (Ra)	60 to 80 (Ra)
Re-Strike	Instant	10 to 15 minutes
Flicker	None	Often
Glare	None	High
Environmental Safety	No Mercury	Contains Mercury
	No lamp waste in 10 years	Concern with lamp wastage over 10 years
Power	200W Lamp - 10W Ballast	400W Lamp - 60W Ballast